CLAIMS

1. A wear-resistant copper-based alloy, comprising, by weight, 4.7 to 22.0% nickel, 0.5 to 5.0% silicon, 2.7 to 22.0% iron, 1.0 to 15.0% chromium, 0.01 to 2.00% cobalt,

2.7 to 22.0% one or more of tantalum, titanium, zirconium and hafnium, and the balance of copper with inevitable impurities.

2. A wear-resistant copper-based alloy, comprising, by weight, 4.7 to 22.0% nickel, 0.5 to 5.0% silicon, 2.7 to 22.0% iron, 1.0 to 15.0% chromium, 0.01 to 2.00% cobalt,

2.7 to 22.0% one or more of molybdenum, tungsten, vanadium, tantalum, titanium, zirconium and hafnium,

0.01 to 5.0% one or more of molybdenum carbide, tungsten carbide, vanadium carbide, chromium carbide, tantalum carbide, titanium carbide, zirconium carbide and hafnium carbide, and the balance of copper with inevitable impurities.

3. A wear-resistant copper-based alloy according to claim 1 or claim 2, wherein silicide is dispersed therein.

4. A wear-resistant copper-based alloy according to one of claims 1 to 3, further comprising a matrix and hard particles dispersed in said matrix,

said matrix having an average hardness of Hv 130 to 250 and said hard particles having a higher average hardness than that of said matrix.

5. A wear-resistant copper-based alloy according to claim 4, wherein said hard particles have an average particle diameter of 5 to 3000 μm.

6. A wear-resistant copper-based alloy according to one of claims 1 to 5, which is used for cladding.

7. A wear-resistant copper-based alloy according to one of claims 1 to 6, which is used for cladding by being melted by a high-density energy beam and then solidified.

8. A wear-resistant copper-based alloy according to one of claims 1 to 7, which constitutes a cladding layer to be clad on a substrate.

9. A wear-resistant copper-based alloy according to one of claims 1 to 8, which is used for a sliding member.

10. A wear-resistant copper-based alloy according to one of claims 1 to 9, which is used for valve train components for an internal combustion engine.